

REMARKS

The present amendment is in response to the Office Action dated June 3, 2004. Claims 1-19 are now present in this case. Claims 1, 5 and 7 are amended. New claims 10-19 are added.

The Examiner has objected to Figures 1, 3 and 8 for lack of proper descriptive labels. These figures have been amended in a proposed drawing change. Upon acceptance by the Examiner, formal drawings will be submitted.

The Examiner objected to the disclosure as lacking an abstract. An abstract has been provided with this response.

The Examiner objected to claims 1 and 7 for minor informalities. The applicants have amended claims 1 and 7 in accordance with the Examiner's suggestions.

Claims 1-6 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Claims 1 and 5 have been amended to more clearly recite the invention. Accordingly, the applicants kindly request that the claim rejection under 35 U.S.C. § 112, second paragraph, be withdrawn.

Claims 1 and 4-6 stand rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 5,649,291 to Tayloe. The applicants kindly disagree with the assessment of Tayloe and its applicability to the claimed invention. Figure 3 of Tayloe illustrates the creation of a cell cluster list (*i.e.*, a neighboring cell list) by the ground control station. Figure 4 illustrates the data format used for the cell cluster list. It is noted that the subscriber unit SU (*i.e.*, the mobile station) plays no role in the generation of the cell cluster list. Figure 9 of Tayloe and the accompanying description from column 8, line 53 – column 9, line 36 describe the process of receiving and decoding cell cluster list data by the SU. If the received data packet does not include cell cluster list data, the process of Figure 9 ends. (See column 8, line 61 – column 9, line 5.) If the received data packet contains cell cluster data, it is processed in the same manner each and every time. Tayloe states that “when task 130 determines that a just-received packet 92 (see Fig. 7) includes data from cell cluster list 54, a task 132 adds the data to

a cell cluster list 134 maintained at SU 26.” (See column 9, lines 6-8.) Once the data is decoded and stored in the cluster list, the SU makes signal strength measurements and adds this data to the cell cluster list as well. However, it is clear from the description that the data packet containing cell cluster list data is completely decoded and stored in the cell cluster list in step 132.

In contrast to Tayloe, the invention recited in claim 1, at one point, decodes only a portion of neighboring cell data. As discussed in the specification at pages 1-2, one portion of neighboring cell data, such as those cells served by the same satellite, change slowly and do not require frequent updating. Another portion of neighboring cell data, such as those cells served by satellites in other orbits, changes rapidly and requires more frequent updating. Thus, neighboring cell data can be broken up into two portions. The mobile station of claim 1 advantageously need only decode the rapidly changing portion of the neighboring cell data, thus reducing processing time and reducing power consumption. There is nothing in Tayloe to suggest that the mobile station decodes all of a set of neighboring cell data at one time yet another time decodes only a portion of the set of neighboring cell data, as recited in claim 1.

An exemplary embodiment of this process is illustrated in the flow chart of Figure 8 of the present application and described in the specification at pages 10-11. Upon initial communication with a satellite, the mobile station receives a set of neighboring cell data. In an exemplary embodiment, the neighboring cell data is transmitted in two data portions relating to first and second satellites, respectively. (See page 10, lines 21-24). At a first time, the mobile station decodes both first and second data portions to have complete neighboring cell data relating to both the first and second satellites. Upon receiving subsequent sets of neighboring cell data, the mobile station advantageously need only decode one of the two data portions relating to either the first satellite or the second satellite. An alert message received by the mobile station provides an indication of which data portion must be decoded. As those skilled in the art can appreciate, decoding only a portion of the received data saves processing steps executed by the mobile station and they advantageously save power by requiring less processing steps.

With respect to claim 1, the method recites *inter alia* “decoding all of a set of neighbouring cell data transmitted in a broadcast channel to generate a neighbouring cell list.” The method also includes making signal measurements and further recites “decoding a portion only of the set of neighbouring cell data transmitted in the broadcast channel and modifying the neighbouring cell list in dependence thereon.” As noted above, Tayloe does not teach or even suggest decoding only a portion of the received cell data. The flow chart of Figure 9 in Tayloe and the accompanying description clearly decode and store cell cluster list data in exactly the same way each and every time. Accordingly, claim 1 is clearly allowable over Tayloe. Claims 2-6 are also allowable in view of the fact that they depend from claim 1, and further in view of the recitation in each of those claims.

Claims 7 and 8 are rejected under 35 U.S.C. § 103(a) as unpatentable over Tayloe combined with U.S. Patent No. 6,396,826 to Ohlson et al. The inapplicability of Tayloe has already been discussed. Specifically, Tayloe does not teach or suggest transmitting neighboring cell data with “ the neighbouring cell data comprising a first portion relating to cells served a first satellite in an orbit having a first plane and a second portion relating to cells served by a second satellite in an orbit having a second, different plane,” as recited in claim 7. As previously discussed, neighboring cell data for cells served by the same satellite (e.g., the first satellite in claim 7) are relatively static and do not require updating as frequently as neighboring cell data from a satellite in a different orbital plane (e.g., the second satellite in claim 7). Apportioning the neighboring cell data in this manner advantageously allows a more efficient decoding process in the mobile unit.

Although the cell cluster list data must inherently include an identification of specific satellites, Tayloe does not teach any differentiation between neighboring cell data associated with a first satellite and neighboring cell data associated with a second satellite other than a satellite ID. For example, Figure 4 of Tayloe illustrates the data format of a cell cluster list. The target cell entry 60 contains a satellite ID. However, each of the multiple data entries for target cell data has exactly the same format and is transmitted as a single data packet. There is no indication or suggestion in Tayloe that

data be apportioned into first and second portions relating to the first and second satellites, respectively, as recited in claim 7. Ohlson is cited in the Office Action merely for illustrating the transmission of data from first and second satellites in first and second orbital planes, respectively. However, Ohlson does not teach or suggest apportionment of neighboring cell data as recited in claim 7. Furthermore, the combination of references do not suggest the method of claim 7. Accordingly, claim 7 is clearly allowable over Tayloe and Ohlson. Claims 8 and 9 are also allowable in view of the fact that they depend from claim 7, and further in view of the recitation in each of those claims.

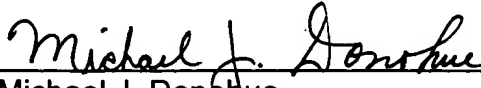
New claim 10 is directed to a method of operating a mobile station in a satellite communication system wherein the mobile station is capable of communicating alternatively with a first satellite or a second satellite of the satellite communication system. Claim 10 recited *inter alia* "on a plurality of occasions, receiving a set of neighboring cell data transmitted in a broadcast from one of the first and second satellites, the set comprising first and second data portions relating to communication with the first and second satellites, respectively." Claim 10 further recites "upon a first of the plurality of occasions, decoding the first and second data portions" as well as "upon subsequent ones of the plurality of occasions, decoding only a selected one of the first and second data portions." As discussed above, Tayloe does not teach or suggest apportionment of the neighboring cell data in the first and second data portions relating to the first and second satellites, respectively. Furthermore, Taylor does not teach or suggest decoding both first and second portions on a first occasion of receipt of neighboring cell data and upon subsequent occasions decoding only a selected one of the first and second data portions. None of the other cited references teach or suggest such a method. Therefore, claim 10 is clearly allowable over the cited references. Claims 11-14 are also allowable in view of the fact that they depend from claim 10, and further in view of the recitation in each of those claims.

New claim 15 is an apparatus claim directed to a mobile station in a satellite communication system having a plurality of satellites and recites *inter alia* "a receiver capable of communicating alternatively with a first satellite or a second satellite

of the plurality of satellites, the receiver receiving a set of neighboring cell data transmitted in a broadcast from one of the first and second satellites on a plurality of occasions, the received data set comprising first and second data portions relating to communication with the first and second satellites, respectively." Claim 15 further recites "a decoder to decode the received data set, the decoder configured to decode the first and second data portions upon a first of the plurality of occasions that the receiver receives the data set, and to decode only a selected one of the first and second data portions upon subsequent ones of the plurality of occasions that the receiver receives the data set." As discussed above with respect to claim 10, none of the cited references, taken alone or in combination, suggest an apparatus in which a receiver receives a complete data set, comprising first and second data portions, and in which only a portion of the neighboring cell data set is decoded. Accordingly, claim 15 is clearly allowable over the cited references, Claims 16-19 are also allowable in view of the fact that they depend from claim 15, and further in view of the recitation in each of those claims.

In view of the above amendments and remarks, reconsideration of the subject application and its allowance are kindly requested. If questions remain regarding the present application, the Examiner is invited to contact the undersigned at (206) 628-7640.

Respectfully submitted,
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